

Monday, March 20, 2017 1:30:39 PM

Item ID: 646.3311

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop ***NS2***

Item Name: RH Half - Upper Cutter Assembly

Start Date: 3/22/2017 **Start Qty:** 4.00

4

Cust Item ID:

Required Date: 3/30/2017 **Req'd Qty:** 4.00

4

Customer:

Reference:

Run Start *NR1*

Approvals: _____ **Process Plan:** DAS **Date:** MAR 20 2017

Tooling: _____ **Date:** _____

Stop *NR2*

QC: _____ 9-89

Date: _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
646.3300	N/C3

110

4.35

110

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

1977

HAAS CNC vertical machine #1

1-Machine per folio FB154

DWG REV: *N/C*

FOLIO REV: ~~44~~ 48

Blank 13.375

2- deburr and break all sharp edges

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Memo

0.00

Quality Control

DAS
33
9-89
17103/24

DAS
33
9-89
17 103/24

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									

Work Order ID 158338

Monday, March 20, 2017 1:30:39 PM

158338

Page 2

Item ID: 646.3311 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: RH Half - Upper Cutter Assembly
Start Date: 3/22/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 3/30/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00				<u>4</u>	<u>0</u>		DAS 14 9-89 17/03/24
140 *140* Outsource4 Outsource process - Anodize	Outsource process-Anodize per QSI017 4.1.10.1 Memo Issue P/O to ATG : <u>35865</u> 1- Black Anodize as per Dwg 646.3300 2- PRIME AS PER DWG, SEE NOTE #2 Certification of Comformity is required	0.00 0.00				<u>4</u>	<u>APR 06 2017</u>		DAS 13 9-89
150 *150* Packaging Packaging	Receive & Inspect for Damage & Mat'l Certs Memo	0.00 0.00				<u>4x</u>	<u>SP17-4-25</u>		

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval 		
Description Work Order Deviation				Disposition					
240 21 98-2									
							Completed By 		
							Lead hand / Supervisor Approval Verification 		
							QC / QA Coordinator Approval 		

Root Cause				FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due	☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter	☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes	☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center	☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence		
☐ OTHER : _____							

Work Order ID 158338

Monday, March 20, 2017 1:30:39 PM

158338

Page 3

Item ID: 646.3311 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: RH Half - Upper Cutter Assembly
Start Date: 3/22/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 3/30/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
155	QC5- Inspect part completeness to step on W/O	0.00							DAS 38 9-89
155									
QC	Memo	0.00							
Quality Control	2.4 mils thickness primer								APR 25 2017
180	Identify as per dwg & Stock Location: <u>ackee</u>	0.00							
180									
Packaging	Memo	0.00							
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***								4 APR 25 2017 DAS 38 9-89
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.00							
Quality Control									17/4/27 JF DAS 21 9-89 APR 26 2017

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER :			

Picklist Print

Monday, March 20, 2017 1:30:39 PM

Page 1

Work Order ID: 158338

158338

Parent Item: 646.3311

646 3311

Parent Item Name: RH Half - Upper Cutter Assembly

Start Date: 3/22/2017

Required Date: 3/30/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A NEW ISSUE 12/11/27 JFS VERIFY BY: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B7.000X2.000		Purchased	No			110	f	26.7619	1.115	4.694737		DAS 33 9.89	
M7075T6B7 000X2 000									**				
7075-T6 BAR 7.000" X 2.000" (order in billets - 13.375")												17/03/24	

Location

Loc Qty

Loc Code

MAT001

26.7619

m136715

0.012

m136899

13.375

m137090

13.3749

4.5'

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

APICAL
INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

04765

SHEET 1 OF 1

DWG NO. 646.3300

REV: NC

PREPARED BY J. SOTO

DATE: 12/08/2014

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: UPPER CUTTER ASSY

APPROVED BY:

ENGR. *[Signature]*

MFG. *[Signature]*

QC *[Signature]*

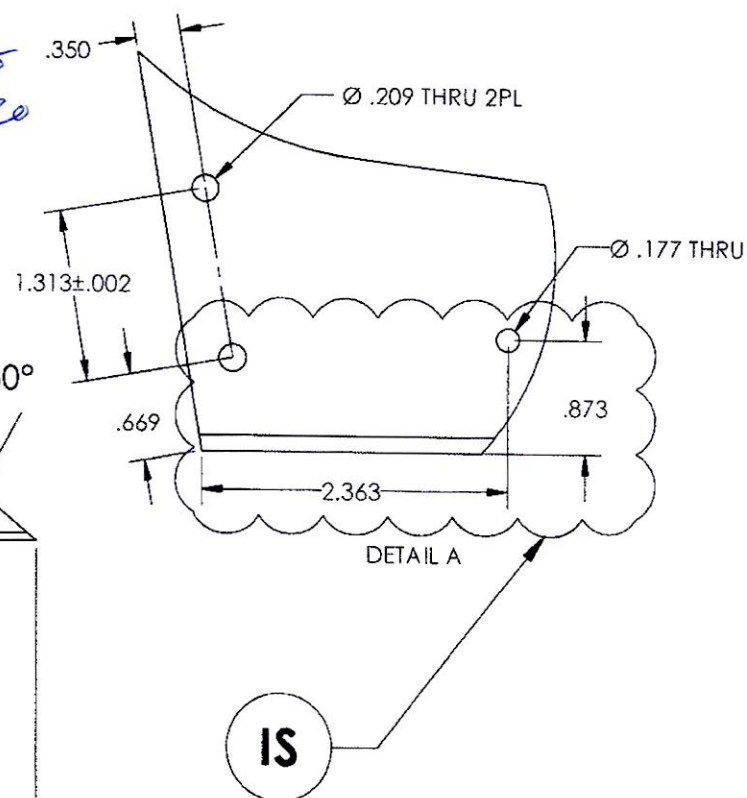
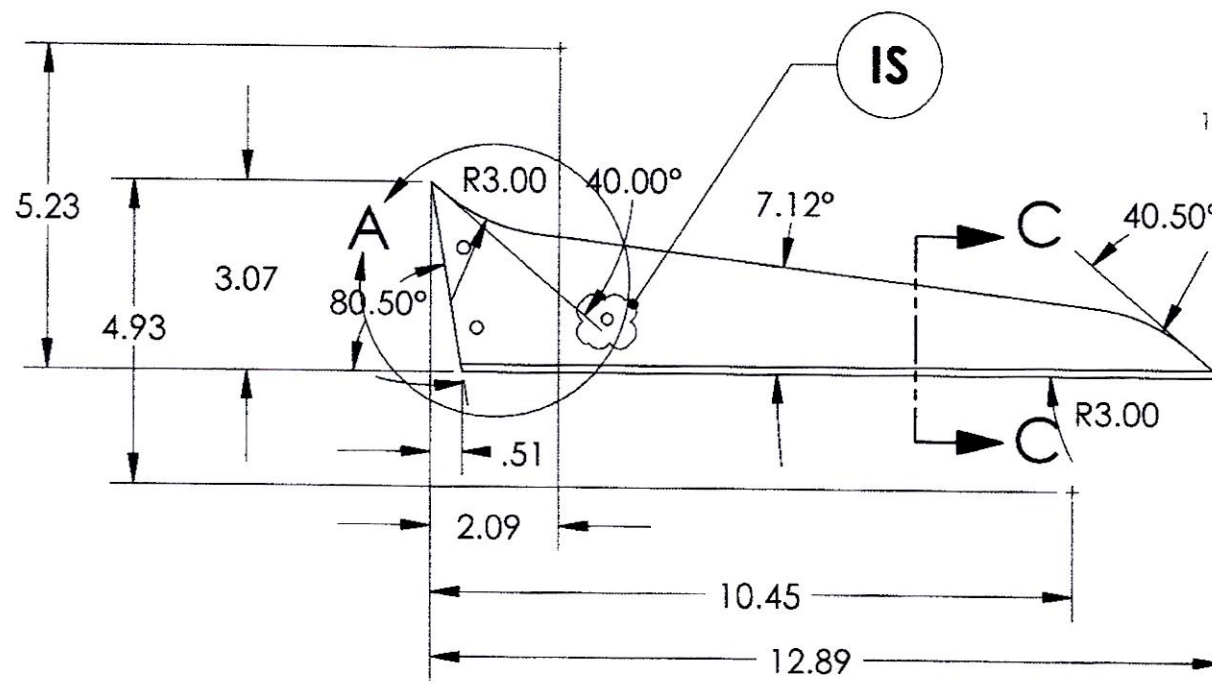
EFF. NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: ADDED HOLE DIMENSION TO 646.3313.

SHEET 5 IS:

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 158338 MLJ
1703-20



DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

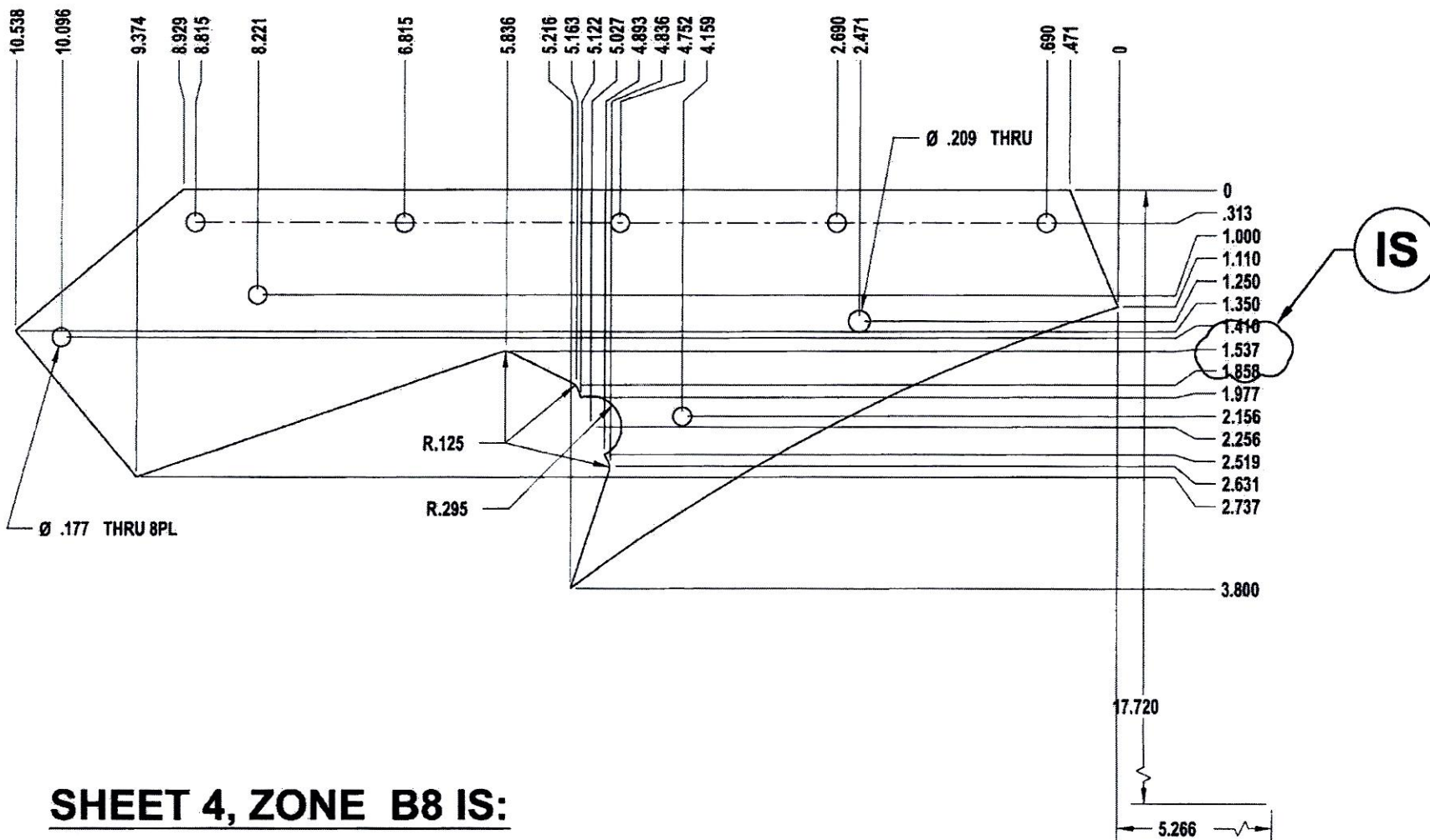
CHANGE CATEGORY

☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED

☐ YES ☒ NO

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03724				SHEET 1 OF 1	
	DWG NO. 646.3300	REV: N/C	PREPARED BY B. PETERS	DATE: 12/05/12	EFFECT ON DWG ☐ INC. ☒ UNINC.	
	DWG TITLE: UPPER CUTTER ASSY					
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER		
TRANSACTION CODES (TC) A-ADD C-CREATE R-REVISE D-DELETE	REASON: REVISED ORDINATE DIMENSION.				ECR: D-12-025	

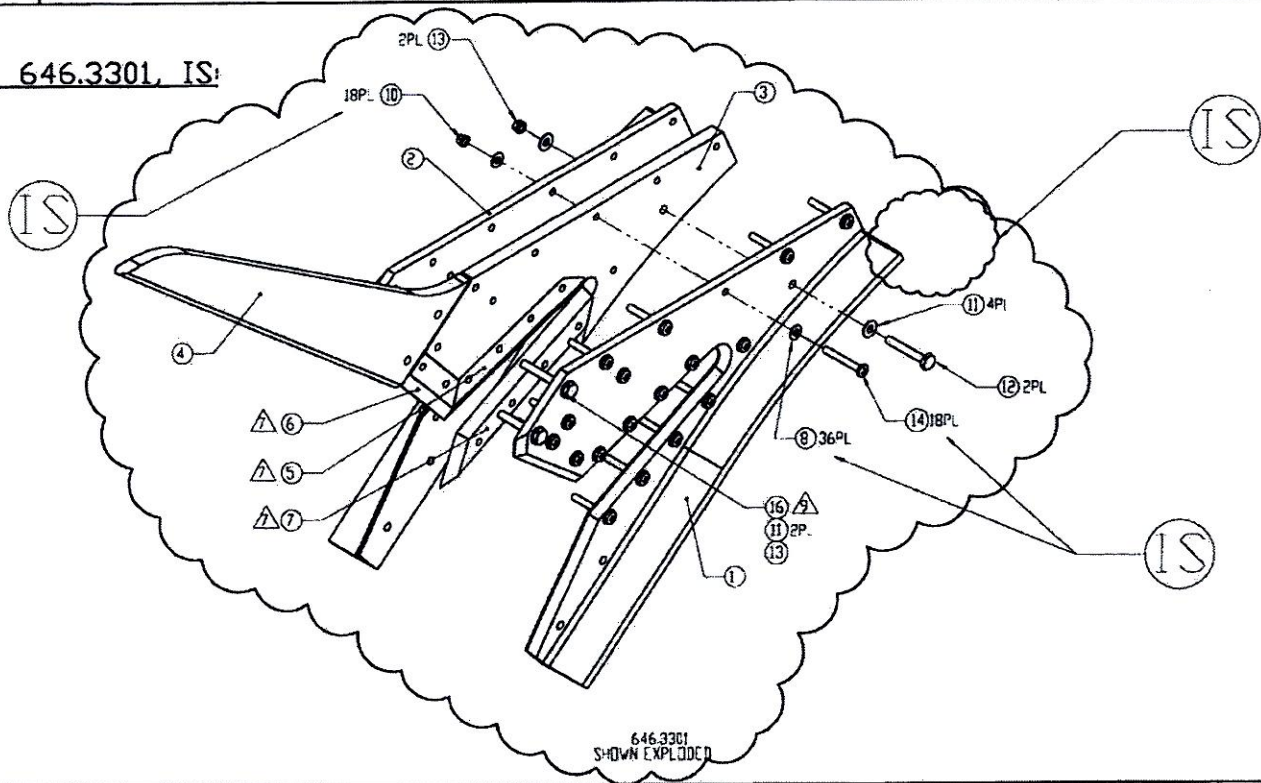


SHEET 4, ZONE B8 IS:

DOCUMENTS EFFECTED:	☐ RFMS ☐ MDL ☐ INSTALL INSTRU ☐ ICA ☐ BOM	CHANGE CATEGORY	DER REVIEW REQUIRED
		☐ MAJOR ☒ MINOR	☐ YES ☒ NO

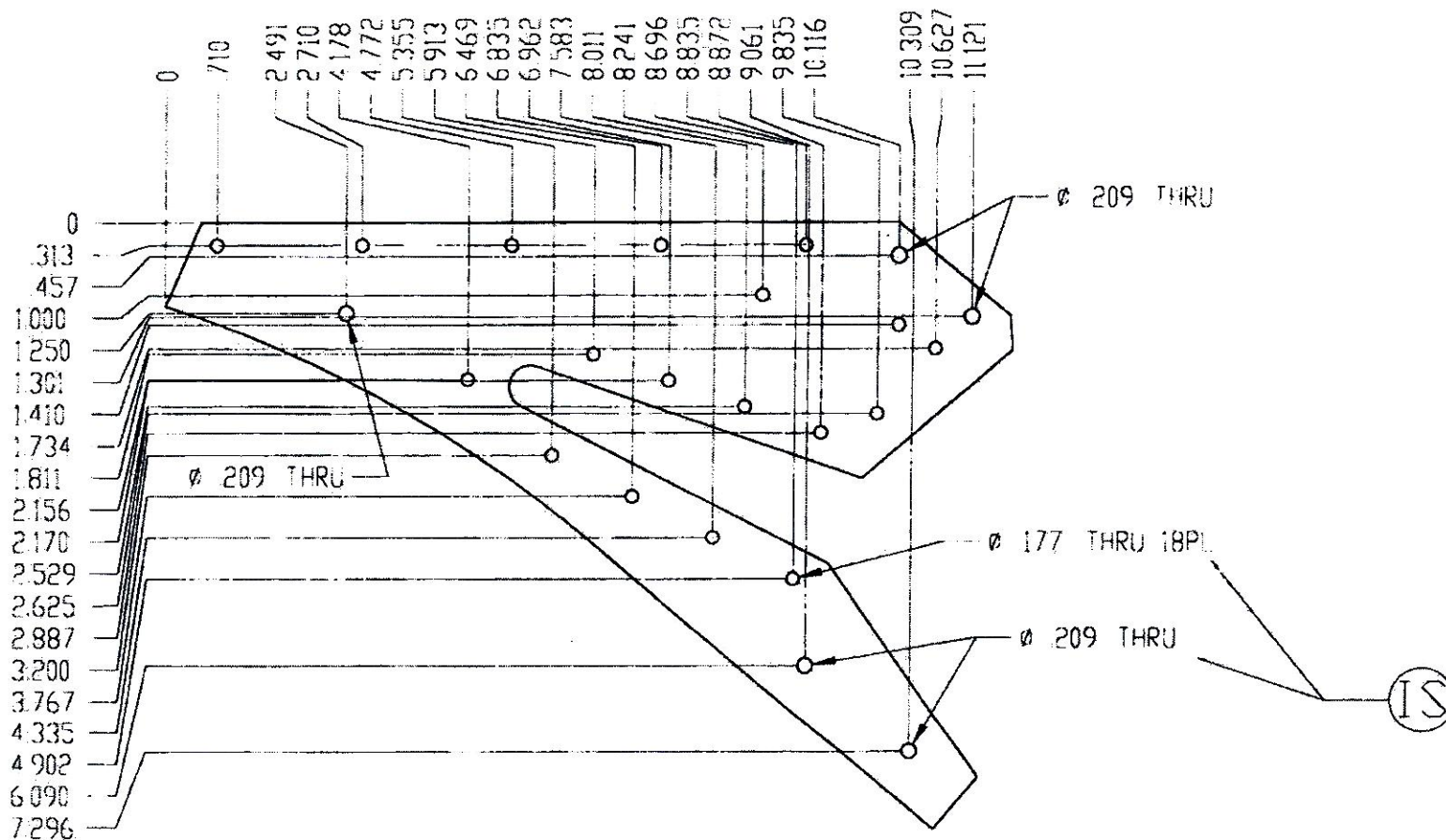
APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 02196			SHEET 1 OF 2	
	DWG NO. 646.3300	REV: N/C	PREPARED BY S. HUFF	DATE: 01/05/09	EFFECT ON DWG ☐ INC. ☒ UNINC.
	DWG TITLE: UPPER CUTTER ASSY				
APPROVED BY: ENGR <i>[Signature]</i>		MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER	
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE		REASON: REMOVED RIVETS IN FAVOR OF ADDITIONAL SCREWS			

SHEET 1, VIEW 646.3301, IS:



14	R	601.2765	18	SCREW	MS27039-0819
10	R	601.1541	18	LOCKNUT	MS21042L08
9	D	601.2766	3	RIVET	MS20470AD5-18
8	R	601.2764	36	WASHER	NAS1149FN832P
			.3301		
F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION
DOCUMENTS EFFECTED:				☐ MDL ☒ INSTALL INSTRU ☒ ICA ☐ FMS ☒ BOM	CHANGE CATEGORY ☐ MAJOR ☒ MINOR
				DER REVIEW REQUIRED ☐ YES ☒ NO	

SHEET 3, SECTION VIEW A-A, IS:

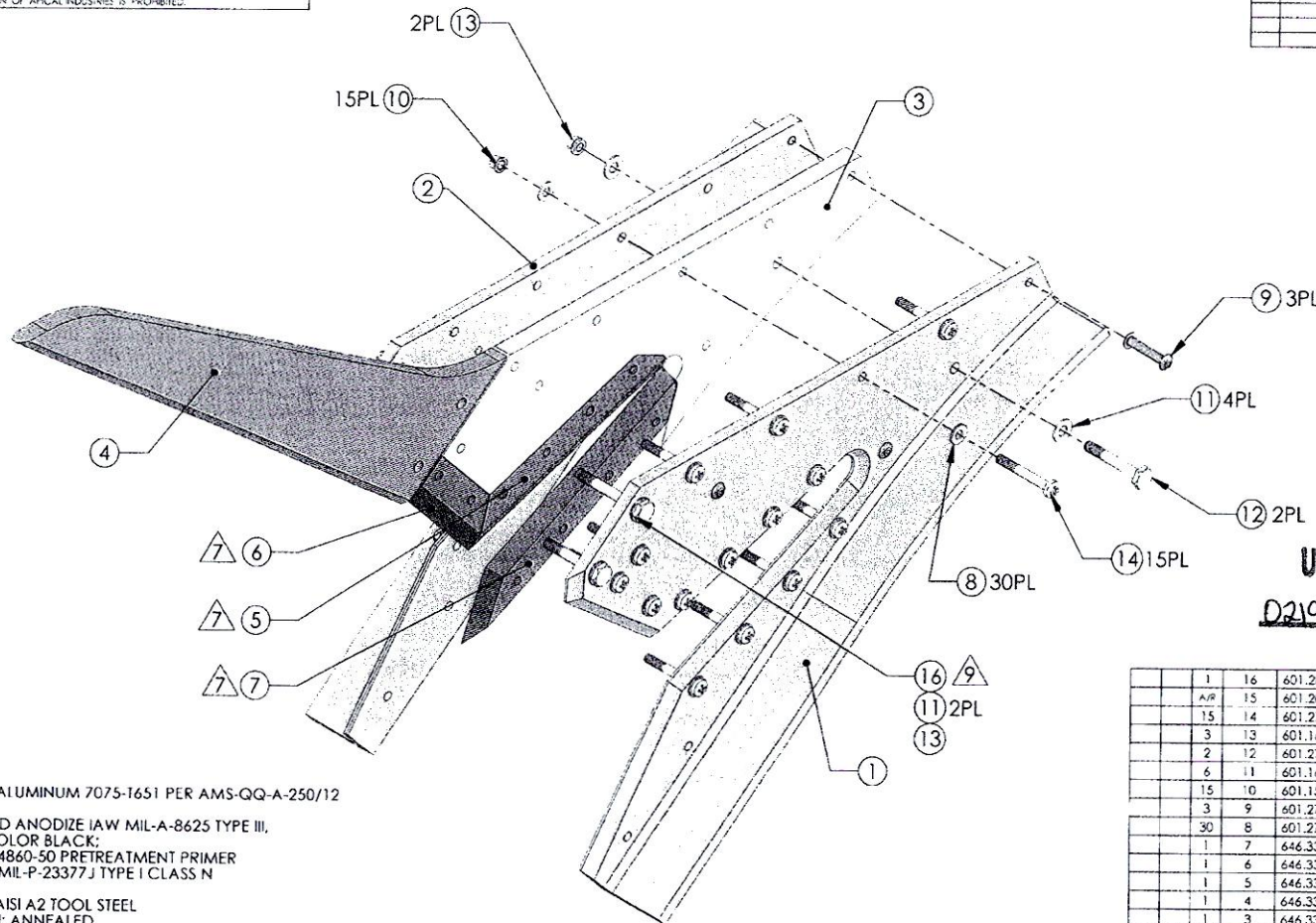


SECTION A-A

F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION

THE INFORMATION CONTAINED BY THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES AND REPRODUCTION IN ANY FORM OR MANNER WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REV	DESCRIPTION	DATE	APPROVED



UNINCORPORATED ECN(s)

021916, 03724, 047165

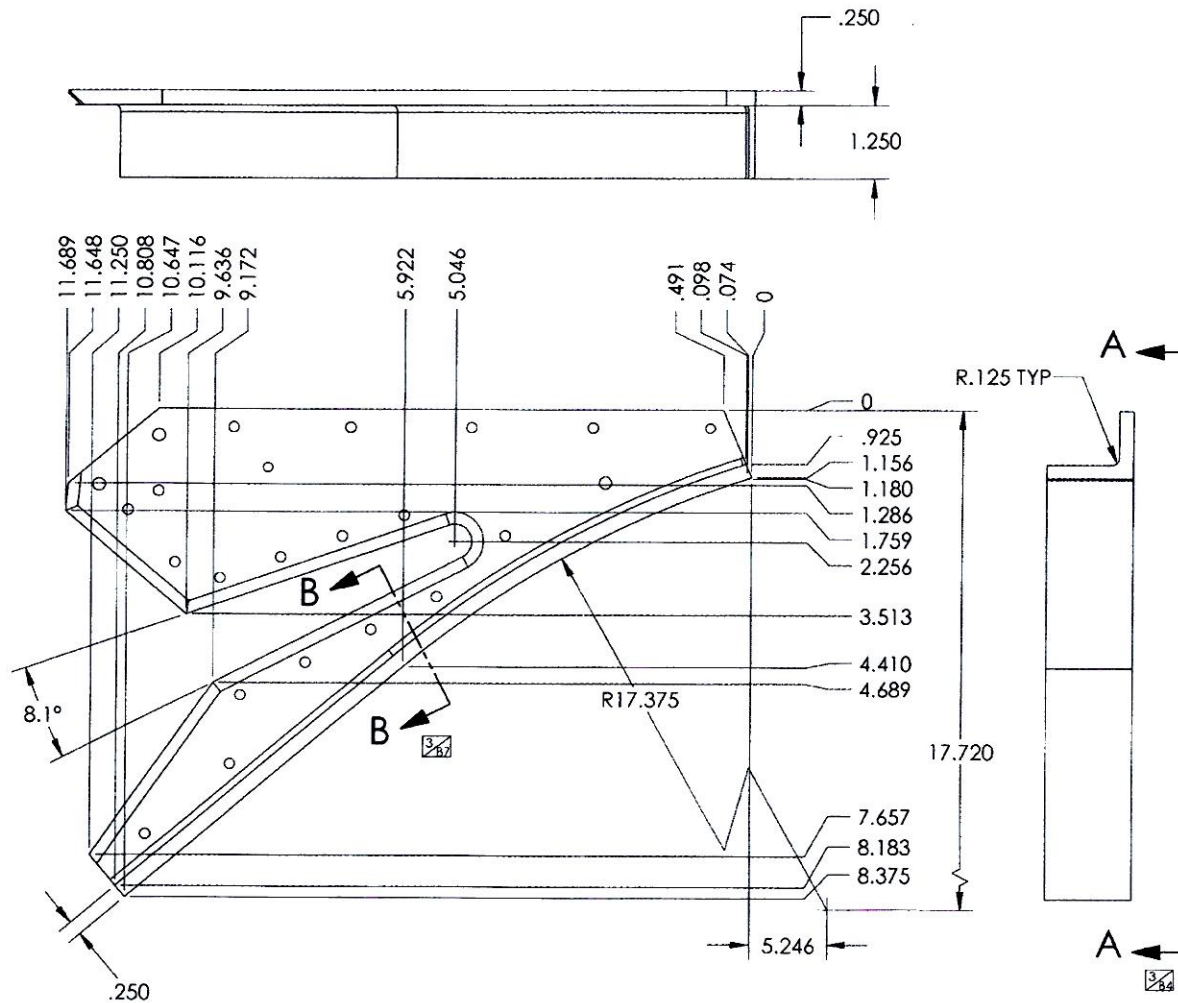
NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; CARDINAL 4860-50 PRETREATMENT PRIMER PRIME IAW MIL-P-23377 J TYPE I CLASS N
- 3 MATERIAL: AISI A2 TOOL STEEL CONDITION: ANNEALED POST PROCESS: HEAT TREAT TO 58-62 Rc ROCKWELL HARDNESS
- 4 FINISH: PRIME IAW MIL-P-23377 J TYPE I CLASS N
- 5 DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED
- 6 IDENTIFY IAW MPP-120
- 7 APPLY F/N 15 AS REQUIRED TO ALL FAYING SURFACES OF F/N 5, 6 & 7 UPON ASSEMBLY
- 8 CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE
- 9 INSTALL FASTENER FINGER-TIGHT

646.3301
SHOWN EXPLODED

		1	16	601.2834	BOLT	AND-14A	
		A/P	15	601.2045	RTV, LOCTITE 598		
		15	14	601.2765	SCREW	MS27029-0814	
		3	13	601.1624	LOCKNUT	MS104013	
		2	12	601.2763	BOLT	AND-12A	
		6	11	601.1607	WASHER	FAST1490332P	
		15	10	601.1541	LOCKNUT	MS104018	
		3	9	601.2766	RIVET	MS20410A-05-18	
		30	8	601.2764	WASHER	FAST1490332P	
		1	7	646.3316	BLADE		△
		1	6	646.3315	BLADE		△
		1	5	646.3314	BLADE		△
		1	4	646.3313	UPPER GUIDE		△
		1	3	646.3312	CENTER PLATE		△
		1	2	646.3311	RH HALF		△
		1	1	646.3310	LH HALF		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
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		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
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		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
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		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
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		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
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		1	1	646.3301	UPPER CUTTER ASSY		△
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		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
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		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
		1	1	646.3301	UPPER CUTTER ASSY		△
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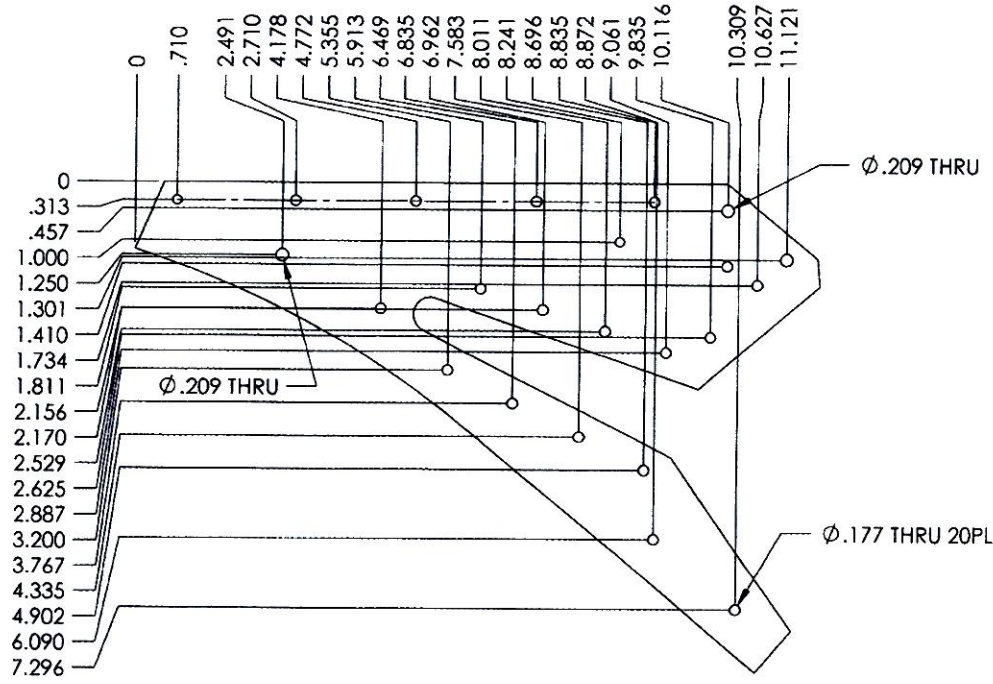
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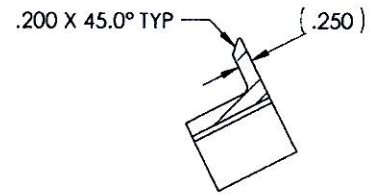
646.3310 SHOWN
646.3311 OPPOSITE

ORIGINAL DATE 10/01/00		APICAL INDUSTRIES	
DRAWN BY S. HUFF		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAY		UPPER CUTTER ASSY	
CONTRACT NO.		SHEET NO. B	REV. N/C
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		DWG. NO. 646.3300	SHEET 2 OF 8
		SCALE: NONE	

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SECTION A-A



SECTION B-B

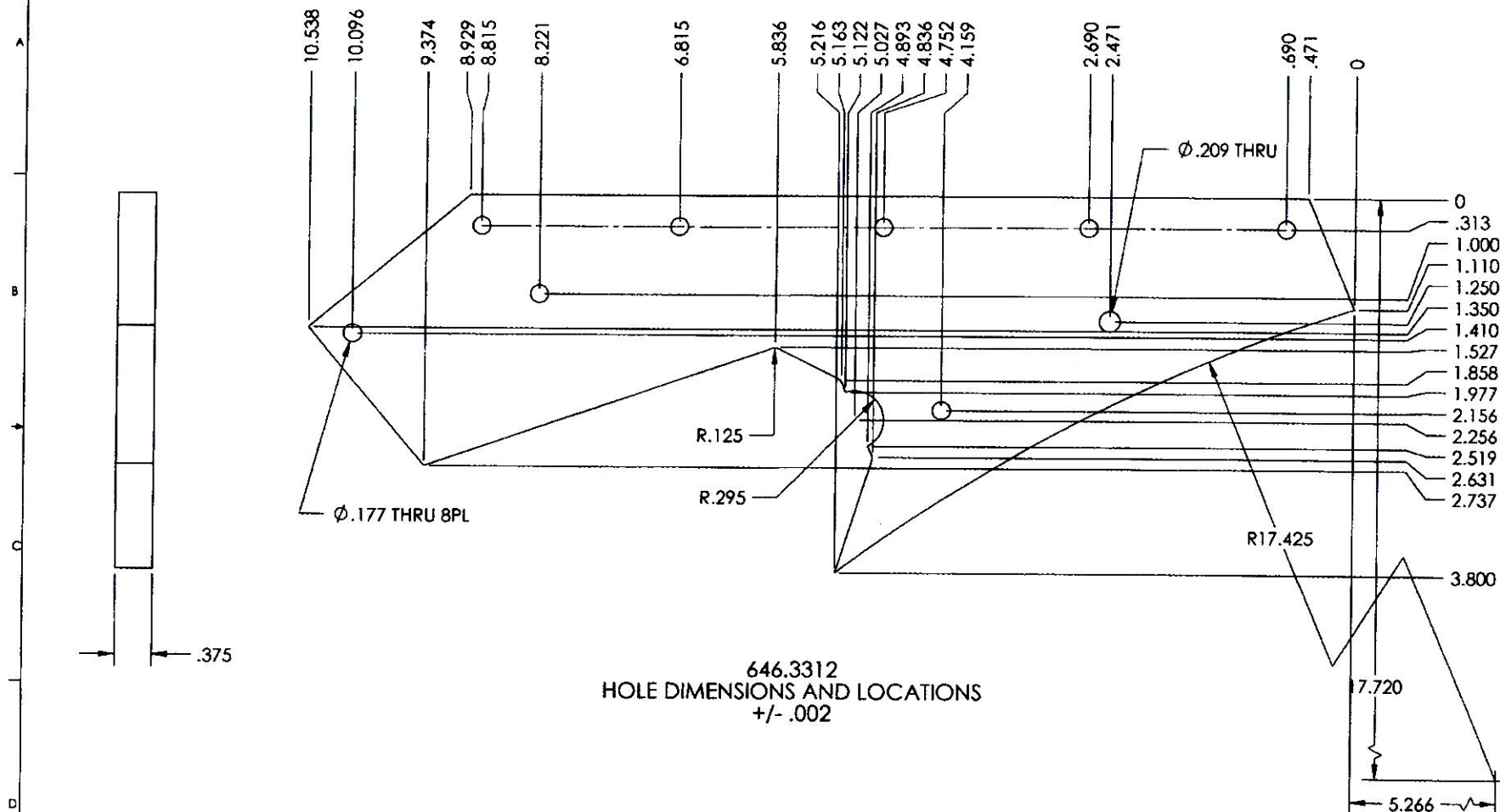
ORIGINAL DATE FACD ON: 11/11/00		DESIGNED BY S. HOFF		DRAWN BY P. BRAVO	
CHECKED BY S. HOFF		APPROVED BY P. BRAVO		DATE 11/11/00	
CONFIRMED BY S. HOFF		APPROVED BY P. BRAVO		DATE 11/11/00	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1. PLACE DECIMALS 100 2. PLACE DECIMALS 1000 3. PLACE DECIMALS 10000 ANGLES 1/2°		MT B	PACK CODE 071426	DWG. NO. 646.3300	REV. N/C
SCALE NONE		SHEET 3 OF 8			

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056 3512 (760)724-5300

UPPER CUTTER ASSY

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

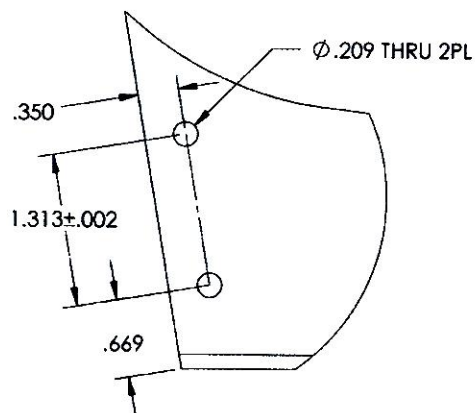
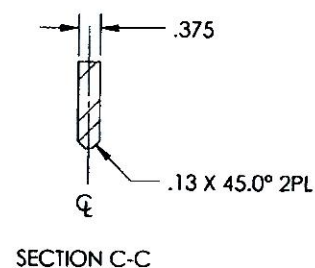
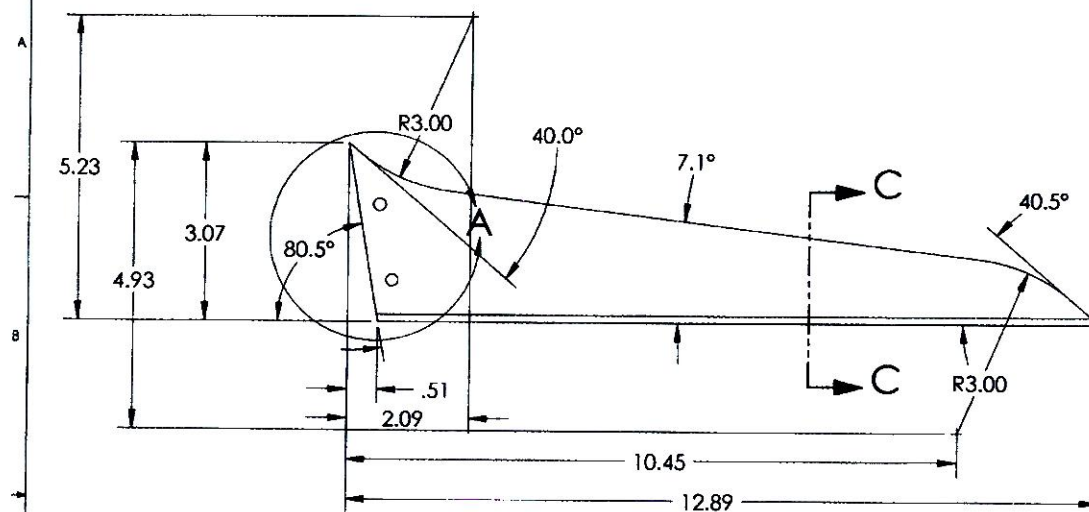


646.3312
HOLE DIMENSIONS AND LOCATIONS
+/- .002

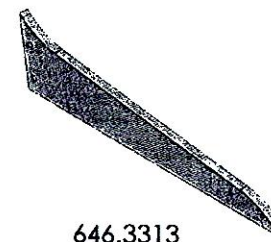
ORIGINATOR DESIGNED BY: J. H. H. H. CHECKED BY: J. H. H. H. DATE: 11/11/81 DRAWING APPROVAL BY: J. H. H. H. DATE: 11/11/81		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS .010 2 PLACE DECIMALS .005 3 PLACE DECIMALS .001		REF: CUGA CODE 8 07M26	DWG. NO. 646.3300 SCALE: NONE
SHEET 4 OF 8		REV. N/C	

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



DETAIL A

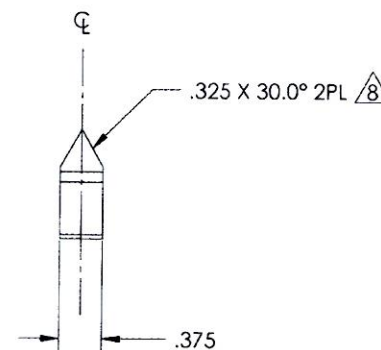
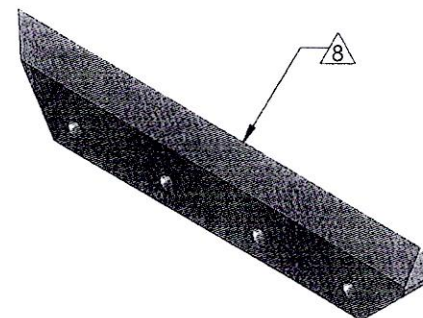
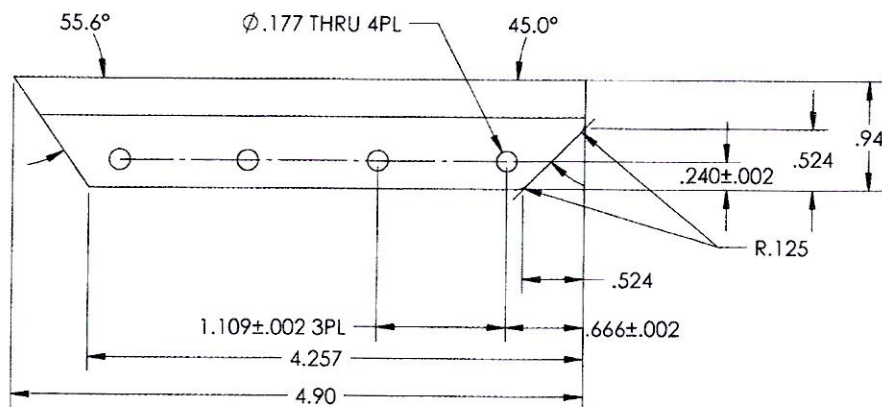


646.3313

ORIGINAL DATE AND TIME: 08-20-08		APICAL INDUSTRIES	
DRAWN BY: S. MEH		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: P. MEH		OCEANSIDE, CA 92056-3512 (760) 724-5300	
DRAWING APPROVAL		UPPER CUTTER ASSY	
BY: S. MEH		SCALE: NONE	
DATE: 07/26/08		SHEET: 5 OF 8	

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THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

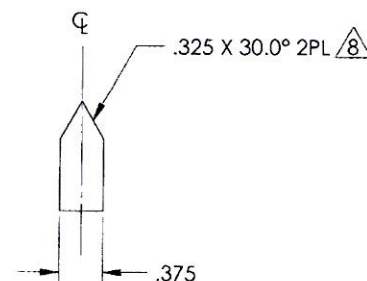
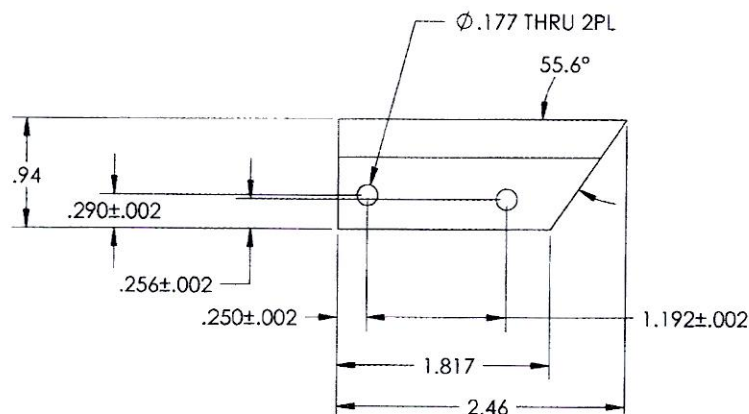
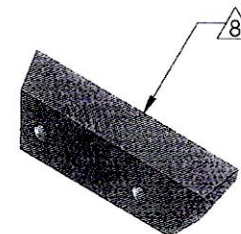


646.3314

ORIGINAL DATE 1/20/08		APICAL INDUSTRIES	
DRAWN BY: J. HUN		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: P. BRAYO		OCEANSIDE, CA 92056-3512 (760) 724-5300	
DRAWING APPROVAL		UPPER CUTTER ASSY	
P. BRAYO		SCALE: NONE	
CONTRACT NO.		SHEET 6 OF 8	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACES DECIMALS ±.01 3 PLACES DECIMALS ±.005 ANGLES ±.5°		101 CAGL CODE DWG NO B 07M126 646.3300	REV N/C

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

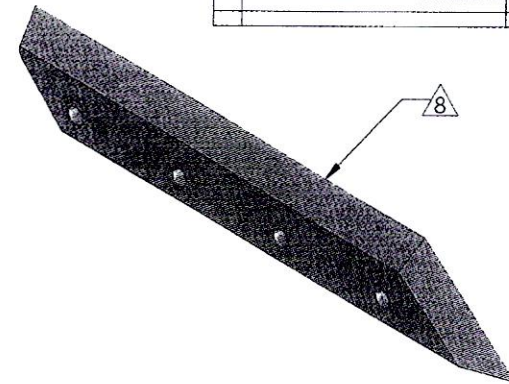


646.3315

ORIGINAL DATE 08-29-08		APICAL INDUSTRIES	
DRAWN BY S. HUI		2608 TEMPLE HEIGHTS DR.	
CHECKED BY P. BRAYO		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAYO		UPPER CUTTER ASSY	
CONTRACT NO.		REF. CAGE CODE B 07M26	DWG. NO. 646.3300
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS .001 3 PLACE DECIMALS .0005 ANGLES ± .5°		SCALE NONE	REV. N/C
		SHEET 7 OF 8	

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

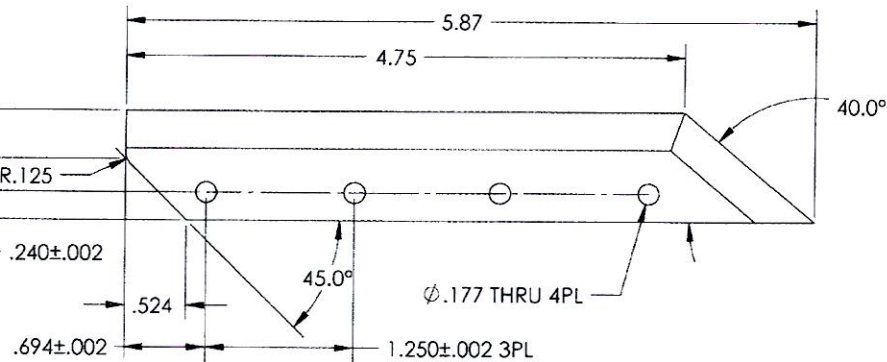


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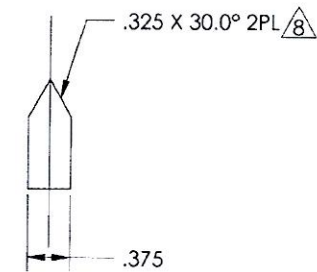
B

C

D



646.3316



ORIGINAL DATE: 08-08-08 INDUSTRY: 08-08-08 DRAWN BY: J. BRAY 1. PUT 2. BRAY DRAWING APPROVAL: J. BRAY CHECKED: J. BRAY CONTRACT NO.			
APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300			
UPPER CUTTER ASSY			
1ST	LARGE ROOM	DWG NO.	646.3300
2ND	07/02/06	REV.	N/C
3RD	07/02/06	SCALE	NONE
4TH	07/02/06	SHEET	8 OF 8



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO35865

Purchase Order Date 4/6/2017
PO Print Date 4/20/2017

Page Number 4 of 6

Order From :

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

VC-ATG001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

613-446-4544

Ship To Contact

Ship To Phone

Ship Via:

Ship Acct:

VENDOR'S TRUCK

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

CAD

FCA - (Free Carrier)

10	158489	646.3812 GUSSET REV. N/C	4/24/2017	11.00	\$6.10	\$67.10
----	--------	-----------------------------	-----------	-------	--------	---------

Yes

4/24/2017

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377 TYPE I CLASS N

Line Total: \$67.10

11	158338	646.3311 UPPER CUTTER REV. N/C	4/24/2017	4.00	\$18.10	\$72.40
----	--------	-----------------------------------	-----------	------	---------	---------

Yes

4/24/2017

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377 TYPE I CLASS N

Line Total: \$72.40

12	158341	646.3310 UPPER CUTTER REV. N/C	4/24/2017	4.00	\$18.10	\$72.40
----	--------	-----------------------------------	-----------	------	---------	---------

No

4/24/2017

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377 TYPE I CLASS N

Line Total: \$72.40

PO Instructions: PRIMER IS SUPPLIED BY DART

Note:

4/20/2017



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913226

Date: 24-Apr-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		OUR TRUCK	
Quantity	Description		
	PLEASE REFERENCE THE PACK LIST NUMBER ON ALL CORRESPONDENCE TO THIS SHIPMENT. IF YOU HAVE ANY QUESTIONS, PLEASE CALL AT (613) 446-4544.		
2 ea	Part: D5155-043 Co-Pilot Black Anodize per MIL-A-8625F, Type II, Class 2 Job: 20910	Rev: B PO: PO35865	Line: 1
11 ea	Part: 646.3812 Gusset Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied) Job: 20919	Rev: N/C PO: PO35865	Line: 10 SP1-4-25
4 ea	Part: 646.3311 Upper Cutter Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied) Job: 20920	Rev: N/C PO: PO35865	Line: 11
4 ea	Part: 646.3310 Upper Cutter Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied) Job: 20921	Rev: N/C PO: PO35865	Line: 12
6 ea	Part: 646.3210 Support Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied) Job: 20922	Rev: N/C PO: PO35865	Line: 13
1 ea	Part: ADMINISTRATION FEE Administrative Fee	Rev: N/A	



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913226

Date: 24-Apr-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		OUR TRUCK	
Quantity	Description		
5 ea	Part: 647.4114 Shim Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied) Job: 20917	Rev: N/C	Line: 8
5 ea	Part: 647.4115 Shim Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied) Job: 20918	Rev: N/C	Line: 9
DATE: <u>24/04/2017</u>			
CERTIFIED SIGNATURE: <u>[Signature]</u>			
RECEIVER SIGNATURE: <u>[Signature]</u>			
Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.			
CERTIFICATE OF CONFORMANCE			
A.T.G. INDUSTRIES INC. CERTIFIES THAT ALL ITEMS IN THIS SHIPMENT CONFORM TO REQUIREMENTS.			
MADE IN CANADA.			